

Brookline Public Schools.

COURSE OF STUDY

IN

DOMESTIC ECONOMY.

PREPARED BY

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INTRODUCTION.

THE course extends over the last four years of the grammar school, each class receiving two hours' instruction per week. In the first year it is intended to give the pupils an idea of the scope of cooking, to be elaborated during the succeeding years, the course of each year is, however, complete in itself. Like the spiral, each circle is to be a little larger than the one next within.

The work of the first year is given in part, fully, the work of the following years is outlined. It is the aim to combine both the art and the science of cooking. At the beginning of each year, the actual cooking is to be made as simple as possible in order to avoid confusing the child and also to give time for the necessary details of house-work. The sequence of the lessons is followed as closely as possible, but in many instances, seasons and prices must be the guide.

FIRST YEAR.

HOUSEKEEPING.

THE pupils wash their own dishes at the desks as soon as they have finished using them. There are three housekeepers appointed at each lesson who have general oversight of the room, their duty being to see that the room is kept and left in a good condition. Thus — number one attends to the fire and care of the stove, number two has general charge of the room and cupboards, while number three sees that the sink is left clean.

Since the important part that dust plays as a carrier of micro-organisms is becoming more and more recognized, attention is given to household bacteriology. Lessons are given on: how to sweep the floor, how to get rid of the dust, to wash dishes, the care of dish towels, the care of the sink, and the use of the various cleaning agents, such as sapolio, pearline, borax, putz-pomade, electro-silicon, pumice stone, etc.

LESSONS ON THE CHEMISTRY OF FOODS.

The food in order to enter the blood from the alimentary canal must be made soluble. The solution of food may be greatly aided by the preparation it receives before entering the alimentary canal. Water, playing the part of Nature's great solvent is considered first.

WATER.

1. Effect of cold water upon gelatine.
2. Effect of boiling water upon gelatine.
3. Difference in taste between freshly boiled water and that which has been boiled for some time. Cause of difference in taste.
4. Temperature of boiling water. Cooking in high altitudes.
5. Way in which the boiling point of water may be raised.
6. Amount of water in some of the common vegetables and fruits. Illustrate both by experiment and charts.

MILK.

After water, milk is studied. Milk is a natural food and contains the food materials in the perfect proportions.

7. Allow milk to stand in a glass tube. Notice what happens at first. Later on.
8. Temperature of boiling milk.
9. Study chart giving composition of milk.

10. Study chart giving composition of the commercial products of milk.

The food materials in milk are taken up in turn, albumen, fats, sugar and mineral matter.

ALBUMEN.

- . The white of egg is typical albumen. Eggs illustrate the form of a concentrated food.
11. Effect of heat on albumen. Illustrate by dropped egg.
12. Carefully separate and examine the yolk and white of an egg. Set each aside for future study.
13. Examine same in the dried state.
14. Make beef tea. Study the albumen in meat. Note the effects of different degrees of heat of the water solution.
15. Drop a piece of beef into boiling water. Result.

FATS.

16. Extract fat from the dried yolk of egg by means of naptha.
17. Extract fat from cornmeal with naptha.
18. Temperature of smoking fat. Correct the expression "boiling fat." Cause of bubbles when the fat is heated.

SUGAR.

19. Burn some sugar. Show that it contains carbon.

The reason that carbohydrates and fats are heating is because they burn as a fuel in the body.

Starch and cellulose are the forms of carbohydrates found in the vegetable world. These are considered next.

STARCH.

20. Pop some corn. This illustrates the effect of heat on the starch grains.

21. Steam rice. This illustrates the necessity of water with starchy foods. Measure before and after cooking.
22. Pour boiling water upon dry starch powder. Result.
23. Break open lump and examine interior.
24. Mix starch with sugar, pour on boiling water.
25. Mix starch with cold water, pour on boiling water. Induction in regard to pudding sauces, etc. Rule for making laundry starch.
26. Put starch and sugar into separate tumblers, add cold water to each. Give terms "solubility," "insoluble," "dissolve."
27. Masticate a piece of cracker thoroughly. Effect of saliva on starch.
28. Masticate a piece of cornmeal. Compare with former.
29. Get starch from a potato.
30. Get starch from flour. Give term "Gluten" to substance left after the starch is washed out of the flour.

CELLULOSE OR WOODY FIBRE.

31. Get cellulose from the potato.
32. Get cellulose from the turnip.

COOKING.

The experiments just given, indicate the plan of the first year's work. Following are given a few of the dishes that may appropriately be given to illustrate these principles. The other side, namely the manipulation, is also to be considered, and attention is given to the various processes of cooking, viz.: steeping, boiling, steaming, broiling, pan broiling, sautéing, frying, and stewing.

WATER.

Lemon Gelatine.

The beverages: *e.g.*, Tea, coffee, etc.

FRUITS.

Stewed fruits, scalloped apples.

WATER AND CELLULOSE.

Vegetables: Potatoes, turnips, carrots, beets, onions, spinach.

MILK.

Rennet custard, milk toast, blane mange.

ALBUMEN.

Beef tea, beef steak, stews, hamburg steak, boiled mutton, soups, fish, eggs.

STARCH.

Rice, macaroni, the cereals, lemon sauce.

Additional Dishes: Biscuit, corn-meal muffins, bread pudding, bread.

SECOND YEAR.**HOUSEKEEPING.**

The housekeeping is the same as in the previous year. A review is made of the various cleaning agents. Each pupil is responsible for her own desk, and the housekeepers for the whole room.

CHEMISTRY OF FOODS.

A review of the previous year's work is made. Since meats are to be studied this year, more attention is given to albumen, and how to cook it. As the foods are studied, attention is called to their value as foods and to their composition.

The children are to learn to recognize the different food materials and food adjuncts, both by sight and by taste.

Prices, and how the different foods are purchased should be considered.

The pupils should be led to see that the laws of harmony apply to the mixing and combinations of food, as they do in music and color.

COOKING.

The practice work of this year consists in cooking meats and fish, white sauce, and simple desserts.

MEATS.

1. By means of diagram draw from class which cuts will be best for soups, steaks, etc.
2. With fresh meat show difference between tough and tender fibre.
3. Cook different parts of the animal and thus get the class familiar with the different cuts as well as with the various methods of cooking:
Beef Steak, Tripe, Chops, Drippings, Meat Balls, Liver, Stew, Small Roast, Beef Roll, Bacon, Fricassee, Minced Meat on Toast.

FISH. Fish illustrates well the cooking of albumen.

- Baked Stuffed Fish.
- Boiled Fish.
- Fish Chowder.
- Fried Codfish.

WHITE SAUCE.

Demonstrate.

Thick white sauce may be served in various ways.

- Salmon in White Sauce.
- Creamed Salt Fish.
- Scalloped Fish.
- Creamed Vegetables.

A thinner white sauce may be used for:

Milk Toast.

Egg Sauce for Fish.

Very thin white sauce:

Egg Vermicelli.

The principle of white sauce is used in one method of thickening soups. Illustrate by making

Tomato Soup.

Potato Soup.

Some meat gravies are made in same way. When possible make gravy when cooking meat, and thus give additional practice in making a smooth sauce.

DESSERTS.

A few simple formulas are given and the method of work carefully demonstrated. From these few principles many varieties may be made either by a change of flavoring or by combinations. The following will suggest the work done in this line.

- I. Cornstarch Mould.
- II. Soft Custard.
- III. Meringue.
- IV. Lemon Gelatine.
- V. Omelet.

When once it is understood how certain effects are produced, an endless variety may be made, thus:—

Italian Jelly, variation of IV.

Orange Pudding, combination of I, II and III.

Snow Pudding, combination of III and IV.

Fruit Tapioca, based on I.

Spanish Cream, combination of II, IV and V, and so on.

Some language work may be brought into the work, thus:

The legends in regard to the introduction of tea and coffee as beverages are read to the class, from which abstracts are written.

Dictionary exercises are given, and the pupils are taught the use of the following terms with their derivatives:—

digestion,	maceration,	to steep,	infusion,
decoction,	percolation,	simmer,	
garnish,			
epicure,	etc.		

THIRD YEAR.

The science of the past two years is reviewed and made broader. In connection with doughs the chemistry of baking powder, and the various ways to obtain carbon dioxide to make the dough porous, are considered.

Foods are studied in a way leading to the subject of dietaries.

The cooking consists in a series of lessons on invalid cookery. Just before Christmas a lesson is given on home-made candies. Then the subject of doughs and batters is studied carefully. The latter part of the year the food materials are studied topically, leading to the combinations of food for simple meals, with the cost and quantity necessary. The whole meal is not always prepared, but parts are, and the cost of the whole estimated.

INVALID COOKERY.

Dishes suitable for sick room diet are cooked, with a few suggestions relative to the comfort of the patient. At the end of the series of lessons, each pupil is to prepare a paper on the care of an invalid and also be able to arrange an invalid's tray.

Dishes to be prepared:

COOLING DRINKS.

Lemonade, Apple Water.

MUCILAGINOUS DRINKS.

Irish Moss Lemonade, Flaxseed Lemonade.

GRUELS.

Corn-meal and Oat-meal Gruels, Milk Porridge.

OYSTERS.

Oyster Stew, Parboiled Oysters.

SIMPLE DESSERTS.

Apple Snow, Lemon Gelatine with Prunes, Blanc Mange.

ADDITIONAL DISHES.

Eggnog, Steamed Custard, Albumenized Milk, Chops.

Demonstrate to class:

Flaxseed Poultice.

How to wring a cloth from boiling water.

What to do in case of a burn or a cut.

DOUGHS.

The subject of doughs and batters may be made very simple. By classing those of a kind together, much may be done in the time allotted.

A few things are considered carefully:—

1. The ways in which gas is introduced to make the mixture light.
2. The consistency of doughs required for certain results.
3. Manipulation in regard to rolling the doughs. From the simple biscuit formula is shown how the other doughs may be evolved.

BISCUIT.

Dutch Apple Cake, Strawberry Shortcake, Flour Muffins, Graham, Rye and Corn-meal Muffins, Griddle Cakes, Cake, Cookies, etc.

BREAD.

FOURTH YEAR.

The work of the last year has not yet been fully worked out.

It is to be a resumé of what has been given the past three years. Many of the children may never have a high school training, therefore it is intended to apply as much chemistry and physiology as is practicable.

The foods are studied topically, and attention is given to dietaries suitable for different seasons.

A review is made of the dishes already studied. Attention is given to garnishing, and pupils are instructed how from simple dishes, more elaborate ones may be made.

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